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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,156	04/16/2004	Eugene A. Fitzgerald	ASC-023C2	8574
51414	7590	05/04/2005	EXAMINER	
GOODWIN PROCTER LLP PATENT ADMINISTRATOR 53 STATE PLACE BOSTON, MA 02109-2881			TRAN, MINH LOAN	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/826,156

Applicant(s)

FITZGERALD

Examiner

Minh-Loan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 April 2004 and 31 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The Preliminary Amendment filed on 04/16/2004 and 08/31/2004 have been entered.

### ***Information Disclosure Statement***

2. If applicant is aware of any relevant prior art, he/she requested to cite it on form **PTO-1449** in accordance with the guidelines set forth in M.P.E.P. 609.

### ***Oath/Declaration***

3. The oath or declaration filed on 04/16/2004 is acceptable.

### ***Drawings***

4. The drawings filed on 04/16/2004 are acceptable.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,876,010 or unpatentable over claims 1-18 of U.S. Patent No. 6,107,653. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the inventions disclose a semiconductor structure comprising a semiconductor substrate; at least one first crystalline layer on the substrate, the first crystalline layer having a surface which is planarized and at least one second crystalline layer formed on the at least one first crystalline layer. Claim 1 of the present application does not disclose the first and second crystalline layers are lattice mismatched with respect to each other or the first crystalline layer is lattice mismatched with respect to the substrate. However, it would have been obvious to one of ordinary skill in the art to form the first and second layers on the substrate having different lattice constant since the first and second layers having different compositions. It would have been obvious to one of ordinary skill in the art to form the first crystalline layer is lattice mismatched with respect to the substrate since the first crystalline layer and the substrate having different compositions.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

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granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Brasen et al. (EP 514,018).

Brasen et al. discloses a semiconductor structure comprising a silicon substrate, at least one first graded  $\text{Ge}_x\text{Si}_{1-x}$  crystalline epitaxial layer formed on the silicon substrate, the first graded  $\text{Ge}_x\text{Si}_{1-x}$  layer having a surface which is planarized and the at least one second  $\text{Ge}_x\text{Si}_{1-x}$  crystalline epitaxial layer formed on the at least one first  $\text{Ge}_x\text{Si}_{1-x}$  layer; wherein the first and second crystalline epitaxial layers are lattice mismatched. Note figure 1 and Example 1 of Brasen et al.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Fitzgerald et al. (6,039,803)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Figure 1A of Fitzgerald et al. discloses a semiconductor structure comprising a semiconductor substrate 12; at least one first crystalline SiGe layer 14 on the substrate 12, the first crystalline SiGe layer 14 having a surface which is planarized; and at least

one second crystalline SiGe layer 16 formed on the at least one first crystalline SiGe layer 14.

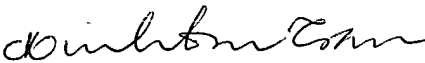
**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Loan T. Tran whose telephone number is (571) 272-1922. The examiner can normally be reached on Monday-Friday 9:00 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MLt  
05/2005

  
Minh-Loan T. Tran  
Primary Examiner  
Art Unit 2826